

REMARKS

Claims 1-71 are now pending in this application. Claims 1-16, 18-20, 22-31 and 33-70 have been amended to correct minor informalities and to define still more clearly what Applicant regard as her invention. Claim 71 has been added to assure Applicant a fuller measure of protection of the scope to which she deems herself entitled. Claims 1, 22, 35, 46, 55 and 63 are in independent form.

The objection to Claim 4 set forth in paragraph 1 of the Office Action is respectfully traversed. Claim 4 is dependent from Claim 3, which expressly defines the first and second durations as between 1 and 8 seconds and 2 and 20 seconds, respectively. Claim 4 further limits the ranges that are defined and recited in Claim 3 by specifying that the first duration is "about 4 seconds" and that the second duration is "about 10 seconds". Thus, Claim 4 further limits the ranges recited in Claim 3, in a manner that is consistent with the described preferred embodiment which utilized an editing format in which the durations in question are, respectively, 4 second and 10 seconds. The term "about" is used in Claim 4 so as to provide that claim with reasonable scope which should capture an infringer who sought to take the essence of the invention of that claim but not exactly reproduce the 4-second-10-second editing sequence of the embodiment.

It is further observed that the term "about" has been allowed in the claims of many granted U.S. patents, and Applicant submits that, given its limited use in the present claims, which are clearly supported by the present description, its use is allowable.

Applicant notes the formal objection to Claims 4, 20, 34, 45, 46, 55 and 63. The typographical errors that underlay that objection have been eliminated.

Claims 1-15, 18, 22-29 and 35-41 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,841,740 (Fijita et al.). Claims 16, 30, 31 and 42-44 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Fijita* in view of U.S. Patent 6,334,022 (Ohba et al.), Claims 17 and 32, as being unpatentable over *Fijita* in view of U.S. Patent 5,436,653 (Ellis et al.), Claim 19, as being unpatentable over *Fijita* in view of U.S. Patent 5,784,521 (Nakatani et al.), Claims 20, 34 and 45, as being unpatentable over *Fijita* in view of *Nakatani* and U.S. Patent 5,956,453 (Yaegashi et al.), Claim 21, as being unpatentable over *Fijita* in view of *Ohba*, *Ellis*, *Nakatani*, and *Yaegashi*, Claim 33, as being unpatentable over *Fijita* in view of *Ellis* and *Yaegashi*, Claims 46-48, 55-57 and 63-65, as being unpatentable over *Yaegashi* in view of *Nakatani*, Claims 49, 50, 58, 59, 66 and 67, as being unpatentable over *Yaegashi* in view of *Nakatani* and U.S. Patent 5,515,101 (Yoshida), and Claims 51-54, 60-62 and 68-70, as being unpatentable over *Yaegashi* in view of *Nakatani*, *Yoshida* and U.S. Patent 6,546,187 (Miyazaki et al.).

As is described in detail in the present application, the present invention is intended to provide a system which will make it possible for those not having the elaborate facilities and highly-developed film-industry skills normally required for high-quality film editing, to perform film editing at relatively low cost, and yet to obtain results of a high caliber.

Independent Claim 1 of the present application states as follows:

"A method of editing a video sequence comprising at least one clip, each clip each having a determinable duration, said method comprising the steps of extracting characteristic data associated with each clip from the sequence, the characteristic data including at least time data related to the corresponding duration;

processing the characteristic data according to at least one template of editing rules to form editing instruction data, the editing rules comprising at least a predetermined cutting format configured to form edited segments based on a plurality of predetermined segment durations; and

processing the video sequence according to the editing instruction data to form an edited sequence of the edited segments.”

There are a number of significant aspects to this claim. Firstly, the "characteristic" data relates for example to time data associated with the duration of each clip. Secondly, the "characteristic" data is processed by a template of editing rules one of which includes a cutting format based upon the durations of the segment. Applicant has carefully reviewed *Fijita* and finds no express disclosure or even suggestion of these specific features (and others) of Claim 1.

Fijita relates to a recording and reproduction system for audio and video data which is focused upon the management of the data in blocks of random access magnetic memory. The *Fijita* apparatus records "a plurality of series of audio data and video data (stock data)" (see column 5, line 47), which Applicant assumes for purposes of discussion to be equivalent to the multiple clips of a video sequence as described in the present application.

In paragraph 4 of the Office Action, (bottom of page 2) it is asserted that *Fijita* "discloses extracting characteristic data associated with each clip from the sequence, the characteristic data including at least time data related to the corresponding duration". Reference (support) is made to Fig. 18A. However, Fig. 18A describes recording start and end positions for each of a number of file of audio/video data. The positions being referred to in Fig. 18A are in fact positions within the recording medium (hard disk drive 30). In

this regard, Fig. 5 effectively corresponds to Fig. 18A and follows from the examples contained in Figs. 3A to 4C. Reference is made here to *Fijita* at column 6, line 46, to column 7, line 49, where the positions within the recording medium are clearly delineated on a block-by-block basis, each block corresponding to one gigabyte and memory (see column 6, line 60).

Further, a text search of the *Fijita* patent fails to identify any use of the term “duration”. Further, while a text search of *Fijita* does reveal the use of the term “time” the context in which that term is used throughout *Fijita* does not seem in any instance to relate to, or even to suggest, “time data” as referred to in the present application or in the claims presently under consideration. Applicant submits that there is no express disclosure in *Fijita* of “at least time data” or any corresponding “duration”. Also, the concept “cut” does not appear to occur in *Fijita*.

Further, even if *Fijita* is deemed to disclose that locations within memory are only delineated by block size, Applicant submits, the Examiner will appreciate that with audio and video data, there is no direct correlation between the time of realtime record/playback of that data and the quantity of memory it may occupy. Memory usage is dependent upon numerous factors, not the least of which include the compression format (if any) that is used, whether video or audio data is being processed, and if video data, whether that data was recorded according to a PAL or an NTSC system (which have different playback rates), or whether such was derived from motion picture film stock, which has a different rate all together. *Fijita* at best (see column 13, line 43) discusses data “length” only in terms of “blocks” of recorded data.

Further, in *Fijita* there is no disclosure of “extracting” any characteristic data from the stock data. The reference contained in the Office Action to Fig. 18A relates to locations within the hard disk drive at which the data is recorded. Applicant submits that those locations are not extracted from *Fijita*’s stock data, but rather are recorded by the control system upon the recording system committing the data to the hard disk drive.

On page 3, the Office Action includes a note that “the clips are considered to have a duration because Figure 18A discloses having start and end times of clips which allows the durations to be determined”. Applicant cannot agree. In Applicant’s view, the interpretation in the Office Action is incorrect, as Figure 18A only describes start and end *positions* of data within the memory. As noted above, those start and end positions are unrelated to time, and *Fijita* includes no disclosure or suggestion as to how such recording positions are or even might be related to time or duration.

The next point raised in the Office Action regarding Claim 1 essentially relates to an interpretation of *Fijita* that the user operated editing in *Fijita* allegedly corresponds to the “template of editing rules” and the “predetermined cutting format” as recited in Claim 1. In this regard, *Fijita* at column 7, lines 50-59, describes the editing data output from the editing apparatus as incorporating the file name and the start and end *positions* of the stock data under consideration. In every instance, the reference to the editing apparatus relates to the position of data within the hard disk drive. Most significantly, Fig. 19A indicates that the start and end points are coincident with memory blocks and from this, it is apparent that using the arrangement of *Fijita*, at best, reproduction of audio/video data can only be delineated on a block by block basis. Presumably, as there is no express disclosure of such, *Fijita* can be interpreted that if an

audio or video segment does not occupy or conclude at the end of a recorded block, whatever data may also be recorded at the end of a block, beyond a desired segment, would also be reproduced. Most significantly, *Fijita* is silent of any editing of the plurality of series of audio/video data. If each “series” of audio/video data in *Fijita* is equivalent to a “clip” as described in the present specification, *Fijita* appears to be devoid of any disclosure as to where any individual clip may be divided into various (further) segments which are used in the ultimate edited production. (In contrast, reference is made to Figs. 2 and 3 of the present application, where it is clearly seen that individual clips of stock data are further edited, depending upon their size, into multiple clips in the final reproduction; it is of course to be understood that the scope of the claims is not limited by the details of the preferred embodiments.) There is no disclosure or suggestion found in *Fijita* that such can be achieved or indeed that any reproduction can be performed that does not require the entire reproduction of any one series of stock data (i.e., entire clip of original stock).

Further, there is no disclosure in *Fijita* of any *template* of editing rules one of which includes a predetermined cutting format. The Office Action indicates that while the present specification discloses these items as being automated, the claim language fails to recite automation. With respect, it is submitted that recitation of automation is not necessary to define Claim 1 over the prior art, as the specific combination of the “template” and the “predetermined cutting format” clearly distinguishes any user-variable cutting rules that may be applied at the whim, of a user operating the editing apparatus of *Fijita*.

In this regard, the primary impetus for the present application is to obviate the need for individual user manipulation or editing of a video sequence. All that is required with, for example, the preferred embodiments of the present invention is that the

user select an appropriate template which has a corresponding predetermined cutting format. The original stock data is then edited according to the predetermined template and the rules applied therein. Nonetheless, explicit recitation of automatic performance is not required to distinguish Claim 1 over the prior art.

For all these reasons, Claim 1 is believed to be clearly allowable over *Fijita*.

Independent Claim 46 is as follows:

"A method of editing a video sequence comprising a plurality of individual clips and associated data including at least time data related to a real time at which the clip was recorded, said method comprising the steps of:

- (a) examining the time data for each clip to identify those of the clips that are associable by a predetermined time function, the associable clips being arranged into corresponding groups of clips;*
- (b) identifying at least one of a beginning and a conclusion of each the group as a title location;*
- (c) for at least one the title location, examining at least one of corresponding time data and further data to generate an insert title including at least a text component; and*
- (d) incorporating the insert title into the sequence at the title location."*

As noted in paragraph 12 of the Office action, *Yaegashi* is silent of any examination of time data associated with the individual clips. There is no disclosure of such contained in *Nakatani*. As a consequence, as this is a specific limitation of the claimed invention, the combination of *Yaegashi* and *Nakatani* does not disclose or suggest the combination of features recited in Claim 46. Claim 46 is believed to be clearly allowable over any permissible combination (if any exists) of these two patents.

In addition, it is believed clear that Claim 46 is allowable over *Fijita*, as well, by virtue of the remarks presented above in connection with Claim 1.

Each of the other independent claims is either a system or a memory-medium claim corresponding either to Claim 1 or to Claim 46, and each is deemed allowable for the same reasons as are Claims 1 and 46, respectively.

A review of the other art of record has failed to reveal anything, which in Applicant's opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims under consideration herein. Those claims are therefore believed to be patentable over the other art of record.

The other claims under consideration in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In this regard, Applicant submits the following additional comments.

With respect to the rejection of Claims 2 to 4, as noted above, *Fijita* does not mention durations but rather locations of data storage within hard disk drive. Claims 2 to 4 accordingly are not anticipated by *Fijita*. Similar comments also apply to Claim 5. Most significantly, with respect to Claims 3 and 4 there is no disclosure or suggestion contained in *Fijita* that any express time editing of an individual clip can be performed. As noted above, and as understood by the Applicant, *Fijita* at best can only reproduce any one "clip" of original stock data in its entirety.

Claim 6 of the present application relates to the embodiment where the cutting durations alternate between the first and second durations. As indicated above,

Fijita is silent of any express duration and can only edit based upon memory block size which is unrelated to time of reproduction/recording.

In respect of the rejection of Claims 7-10 and 23-25, the Office Action again places reliance upon Figs. 19A and 19B of *Fijita* as prior publishing those claims. Below, Applicant provides the entirety of the description of *Fijita* as and where such relates to Figs. 19A and 1913. The relevant locations of that disclosure are also indicated for convenience.

(column 4, line 66 - column 5, line 3)

"FIG 19A and FIG. 19B are views showing the processing for reproducing the audio and/or video data having the same content as that of the edited data by combining the partial data of three or more series of stock data by the data recording and reproducing apparatus shown n FIG. 1."

(column 13, line 62 - column 13, line 65)

"At step 110 (ST110), the microprocessor circuit 102 of the control system 10 generates the file handle (FIG. 19A), stores this in the RAM circuit 106, and records this in the hard disc array 30."

(column 17, line 41 - column 17, line 47)

"Note that, needless to say the data recording and reproducing apparatus 1 according to the present invention not only can generate a reproduction entry from two series of stock data, but also can generate a reproduction entry for reproducing the audio and/or video data having the same content as that of the edited data by combining partial data (FIG. 19B) of three or more stock data (FIG. 19A)."

Having carefully reviewed the above portions, Applicant has been unable to locate any disclosure in *Fijita* of any initial interval of any duration, let alone a predetermined third duration (as distinct from the previously claimed first and second durations) which is discarded from a clip when that clip is edited. As noted above, *Fijita*

does not disclose any editing of any “clip” (a series of audio/video data). Further, Claim 9 defines a fourth duration which is not mentioned in *Fijita*.

Most significantly, it is to be noted that the various durations referred to in the claims are each durations that form part of the predetermined template of editing instructions. While *Fijita* does disclose, to a minimal extent the generation of editing commands by a user, *Fijita* is silent of any predetermined template of editing instructions. The editing commands of *Fijita*, however, are not related to time, but rather location of data in the memory.

Regarding the rejection of Claims 11 and 26, again, there is no disclosure in *Fijita* of cutting segments from clips. If this were to be the case, *Fijita* would disclose the cutting of a segment of data from an individual “series” of stock data and presumably such would have to be related to a discrete portion of stock data sourced from the hard disk drive.

The rejection of Claims 12-15, 27-29 and 39-41 also apparently relies upon the disclosure of Figs. 19A to 19B. Again, from the above quoted portions of *Fijita*, there is no disclosure or suggestion of any of the features of those claims.

With respect to the rejection of Claim 18, reliance is placed upon the disclosure of *Fijita* at Figs. 4A to 4C and Fig. 6. In each of those figures, *Fijita* describes the linking or location of the stock data in the memory. There is no disclosure or suggestion contained in *Fijita* that such information arrives with the input audio/video signal. Significantly, as disclosed at column 7, lines 50-60, *Fijita* describes the file name and position data as arriving from the editing apparatus via the control system. Such is

clearly distinguished from the audio/video input signal that is received by the recording system (see Fig. 1 of *Fijita*).

Regarding the rejection of Claim 36, the features claimed in Claim 36 are not at all suggested by *Fijita*. In this regard, *Fijita* at column 1 emphasizes a desire not to replicate the storage of audio/video data, whereas Claim 36 of the present application expressly defines storage arrangements for storing the edited video sequence.

Regarding the rejection of Claim 37, the Office Action reads the recording system 20 of *Fijita* being a “extracting means” for forming a metadata file of the video sequence based on each clip. With respect, there is no disclosure or suggestion contained in *Fijita* that the recording system 20 has any capacity to extract characteristic/metadata from the input audio/video signal.

Paragraph 6 rejects a number of claims as being obvious in view of a combination of *Fijita* and *Ohba*.

Ohba has been cited as teaching segment durations, corresponding to the first, second, third and fourth durations recited in the claims at the present application and reference is made in the Office Action to the disclosure at Figure 7B of *Ohba*.

Ohba in Fig. 7B shows a displayed list of cuts presented as a *timetable*, each indexed by a constant interval of time. These constant intervals are not equivalent to the segment durations referred to in the present specification. Reference is made in this regard to *Ohba* at column 7, line 59 through to column 8, line 22. Firstly, Fig. 7A is noted as being a “list of scene change cuts produced by detecting scene changes of video information by image *recognition technique* and adding indexes thereto in the automatic indexing part”. As such in this regard, the scene changes in *Ohba* are detected by image

recognition and not by detecting metadata contained with the specific image clips or from time information carried thereby. As disclosed at column 8, lines 10-13, Fig. 7B of *Ohba* merely shows a timetable of lists of cuts which are produced from the lists shown in Fig. 7A indexed by constant intervals of time. From this, the Applicant interprets Fig. 7B to show cuts indicative of images that may be found during the period 9:00 am-9:30 am, and further from the period 9:30am-10:00am, there being three clips or cuts shown in each time period. However, there is no indication in *Ohba* that any of the cuts have any specified duration or time interval. All *Ohba* shows is that these cuts are evidence of that which may be seen during the period 9:00-9:30.

In this regard, it is noted that *Ohba* relates to what is effectively a home video recorder which has intelligent capability of indicating a timetable of cuts and scene changes of those parts of the recorded information that a user may wish to access. This is presumably intended to obviate the user using the “fast forward” function on the remote control to promptly review scenes that are not necessarily desired to be viewed in detail. The arrangement of *Ohba* in this regard merely selects frames from various scenes contained in the recorded material and presents those to the viewer, who can then subsequently conveniently access those particular scenes as desired. There is no disclosure or suggestion contained in *Ohba* that the scene selections are edited according to any predetermined time duration or any editing template. In fact, no editing is performed on the original footage, and all that is produced by the arrangement of *Ohba* is a list and timetable of scene cuts linked to the original recorded stock data.

Further, there is no disclosure or suggestion that the arrangement of *Ohba* can be combined with the arrangement of *Fijita* to provide the invention as presently being

claimed. While the Applicant acknowledges that the arrangement of *Ohba* may be combined with the disclosure of *Fijita* provide an indexing capability to the stored data, there is no disclosure that such indexing is based upon predetermined clip durations. All that the arrangement of *Ohba* adds to that of *Fijita* is the ability to access specific scenes from the recorded stock material. There is no disclosure in any reasonable combination of these two citations of editing video clips according to predetermined durations to achieve an edited sequence. Most significantly, with the combination of *Ohba* and *Fijita*, any clip reproduced will have the same duration as the clip as originally recorded. Such is quite distinct from a clip that has been edited according to the predetermined cutting format of the presently claimed invention.

In paragraph 7, Claims 17 and 32 are rejected as being obvious in view of a combination of *Fijita* and *Ellis*.

Ellis at column 33, lines 32-35, states that “although the scene change by itself is a weak queue as previously mentioned, the scene change can be combined with an audio mute to form a stronger queue”. This, the Office Action combines with the disclosure of *Fijita* as teaching the features of Claims 17 and 32 which relate to using a beat period of a soundtrack to be associated with the edited sequence. With respect, there is no disclosure or suggestion of such in this combination of *Ellis* and *Fijita*. The combination of *Ellis* and *Fijita* merely discloses that a mute can be inserted into the audio soundtrack associated with a change between one scene and another (a change between a clip).

This is completely in contrast to numerous aspects of the present invention where the editing of clips is synchronized, according to Claims 17 and 32 to the beat of an audio soundtrack. There is a significant intellectual difference between these two

alternatives. With the alleged combination of *Fijita* and *Ellis*, the linking of sound and video occurs in a single, one-off instance, that being at a scene change, and is unrelated to any duration of a particular scene. In contrast, in the present invention, the cuts of the clips are performed according to predetermined durations (e.g., 4-10 seconds), and such durations are modified according to an overlying soundtrack according to the particular beat of music being played. For example, a piece of music may have a beat of 120 beats per minute, giving 2 beats per second. Accordingly, the 4 second cutting interval corresponds therefore to 8 beats and the 10 second cutting interval corresponds to 20 beats. With the combination of *Fijita* and *Ellis*, if a scene is 20 seconds long, there would only be one mute at the start of the scene, and one at the end of a scene, irrespective of any audio track overlying the video footage. As a consequence, Claims 17 and 22, and other claims are not made obvious by the combination of *Fijita* and *Ellis*.

Paragraph 8 alleges that Claim 19 is obvious in view of a combination of *Fijita* and *Nakatani*. Claim 19 relates to incorporation of a title matte as part of the edited sequence.

Nakatani, as noted in the Office Action, relates to the incorporation of a title in Fig. 6E and 6F. While such may be the case, a combination of *Fijita* and *Nakatani* as noted above fails to disclose the remaining features of Claim 19 being those features derived from Claim 1 regarding the extraction of characteristic data and the editing of the sequence based upon template rules being applied to the characteristic data.

As a consequence, Claim 19 is not obvious over the prior art.

Paragraph 9 rejects Claims 20, 34 and 45 as being obvious in view of a combination of *Fijita*, *Nakatani* and U.S. Patent 5,956,453 (Yaegashi et al.).

It is acknowledged that *Yaegashi* relates to a system that treats clips and groups of clips as being as scenes. However, the mere combination of *Nakatani* and *Yaegashi* (assuming for argument's sake that such combination would even be permissible) provides for the insertion of a title sequence into the commencement of each particular cut or clip. *Yaegashi* is actually silent of a "predetermined time function" which provides for the title matte to be inserted at the commencement of a scene being a group of clips as opposed to at the commencement of each clip. While the Office Action asserts that clips are time sequential and thus relate to a "predetermined time function", with respect, such is a time sequence rather than a time function based upon a particular relationship. Further, the combination of *Fijita*, *Nakatani* and *Yaegashi* fails to disclose the expressed feature of examining the time data to identify those clips that are associative by the predetermined time function. In any event, Claim 19 is dependent ultimately upon Claim 1, of which *Fijita*, *Nakatani*, and *Yaegashi* are silent of many of the claimed features. Accordingly, the rejection of the claims based upon a combination of *Fijita*, *Yaegashi* and *Nakatani* is believed to be improper.

Paragraph 11 rejects Claim 33 as being obvious in view of a combination of *Fijita*, *Ellis* and *Yaegashi*. Firstly, the Office Action acknowledges that *Fijita* not disclose that data is formed by analysing the video sequence. Such a comment, with respect contradicts that contained in paragraph 4 where the Office Action states that *Fijita* discloses "extracting characteristic data". The Applicant concurs with the comments made regarding *Fijita* not analysing the video sequence made in paragraph 11.

Paragraph 11 also asserts that *Ellis* teaches analysis by sound as previously discussed in respect of the rejection of Claim 16. With respect, *Ellis* does not disclose

analysing sound but rather inserts sound (a mute) upon detection of a scene change. *Ellis* does not analyze sound. It is further suggested that *Yaegashi* discloses image motion analysis by virtue of the cut change point detection portion 103 shown in Fig. 2. *Yaegashi* at column 4, lines 32-43 indicates that the cut change point detection segment 103 detects a plurality of cuts as inputs. Accordingly, this merely detects changes from one cut of the stock data to another. Such, with respect, does not detect motion within data being performed. Motion analysis as described in the present application comprises assessing the content of individual frames for motion within the individual images. Further, as noted above, *Fijita* is silent of many of the features already claimed in the independent claims and as a consequence, Claim 3 the rejection of Claim 33 in paragraph 11 is traversed.

For these additional reasons, therefore, many of the dependent claims are also believed clearly to define additional features that are themselves patentable over the art of record. again, Applicant does not at any point concede the propriety of any of the proposed combinations of references, but has above discussed the rejections on the assumption (made for argument's sake only) that such would be permissible.

In view of the foregoing remarks, it is believed that the entire application is in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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